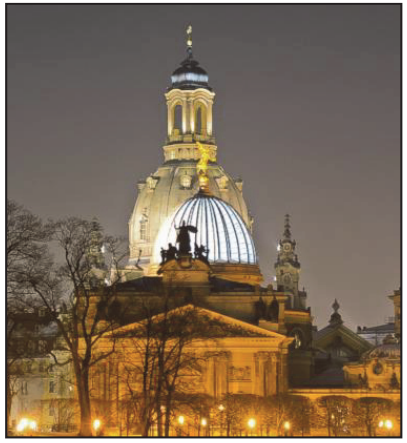
Universitätsklinikum Carl Gustav Carus
DIE DRESDNER.

How to start a new center for the treatment of peritoneal malignancies

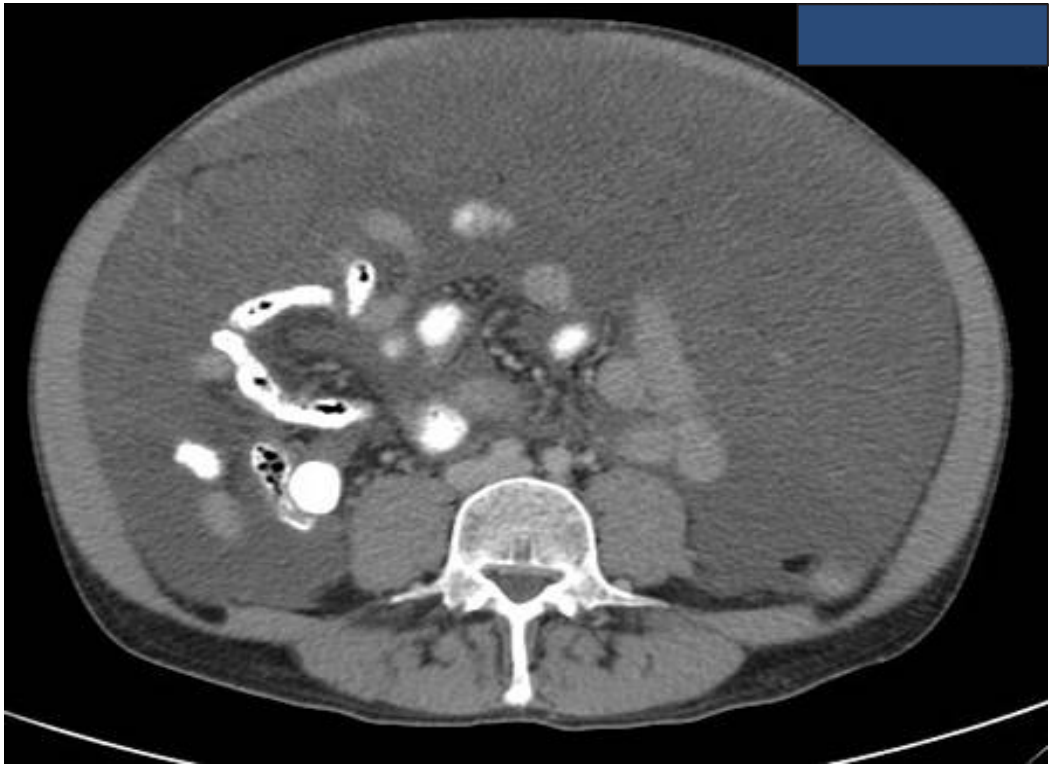
C. Reißfelder

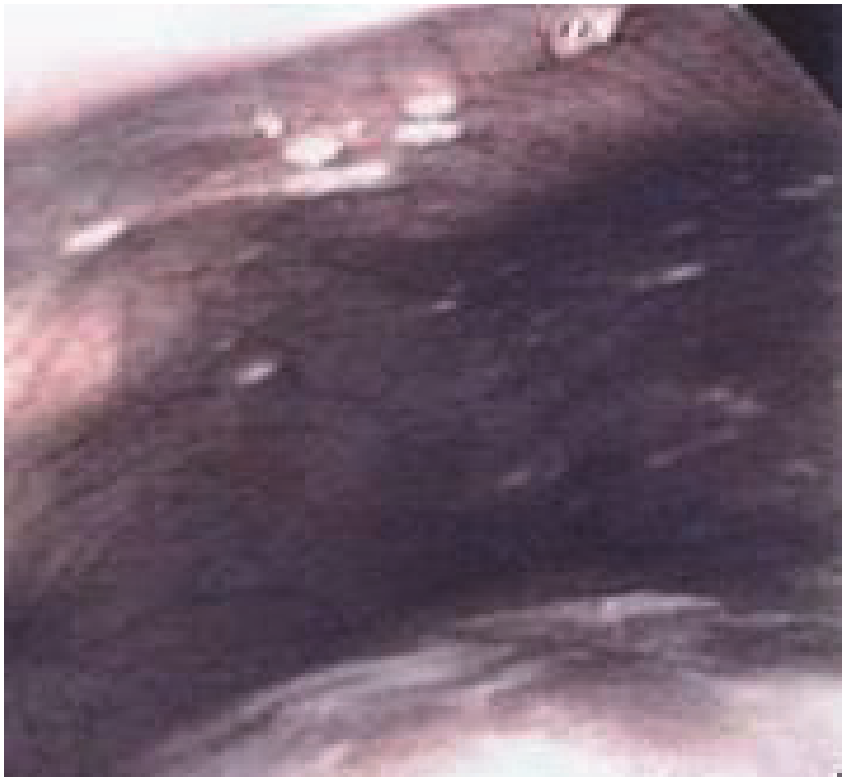
Erster Oberarzt der
Klinik und Poliklinik für Viszeral-, Thorax- u. Gefäßchirurgie
Universitätsklinikum Carl Gustav Carus
an der Technischen Universität Dresden

www.dresdnerchirurgie.de

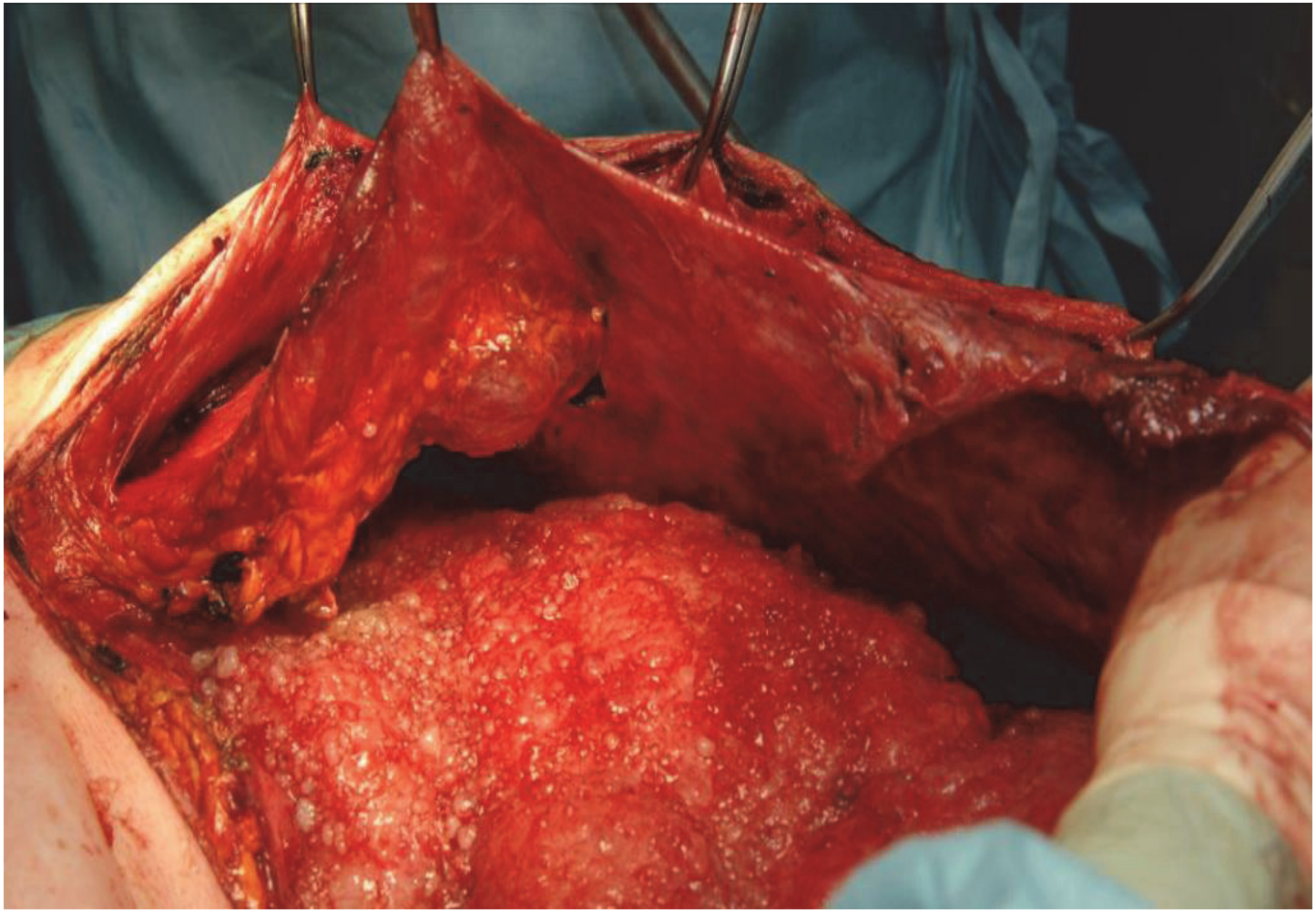


Starting HIPEC

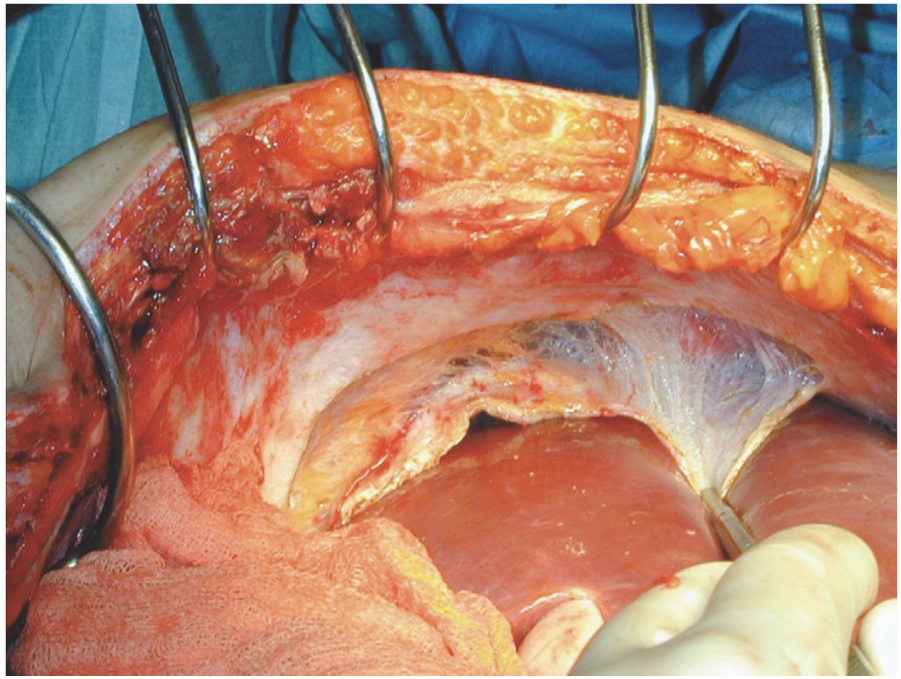


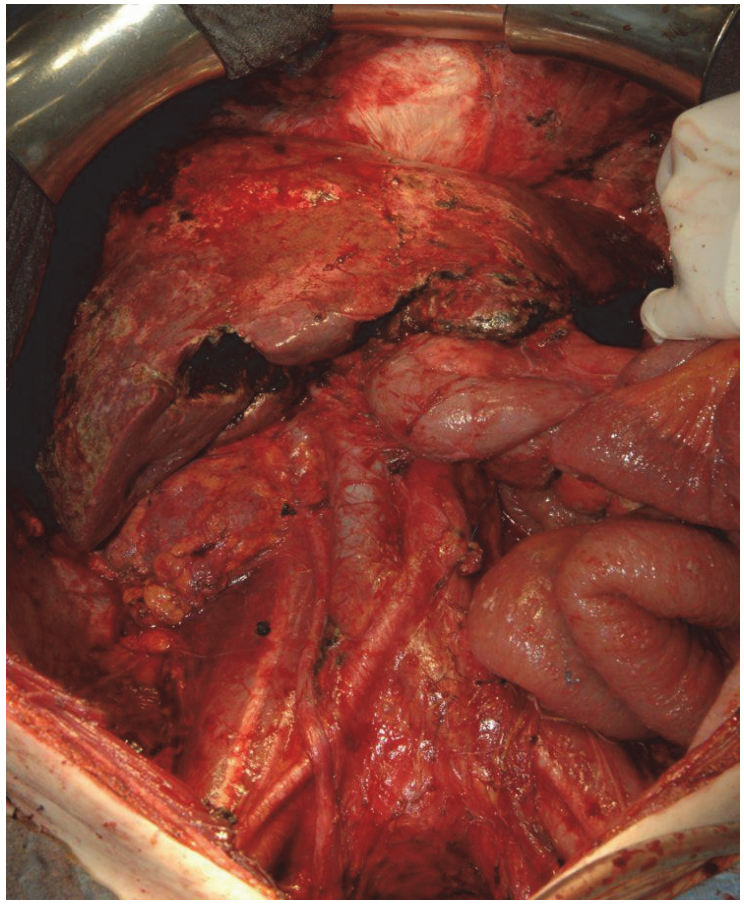


Starting HIPEC

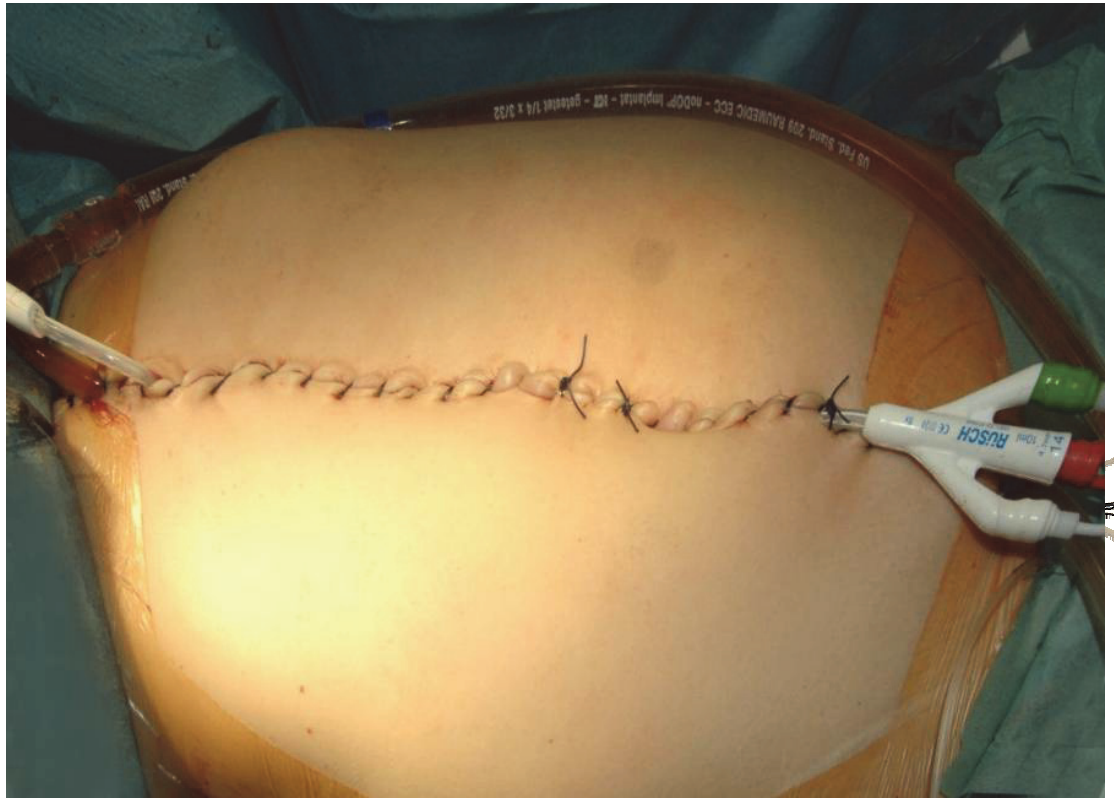


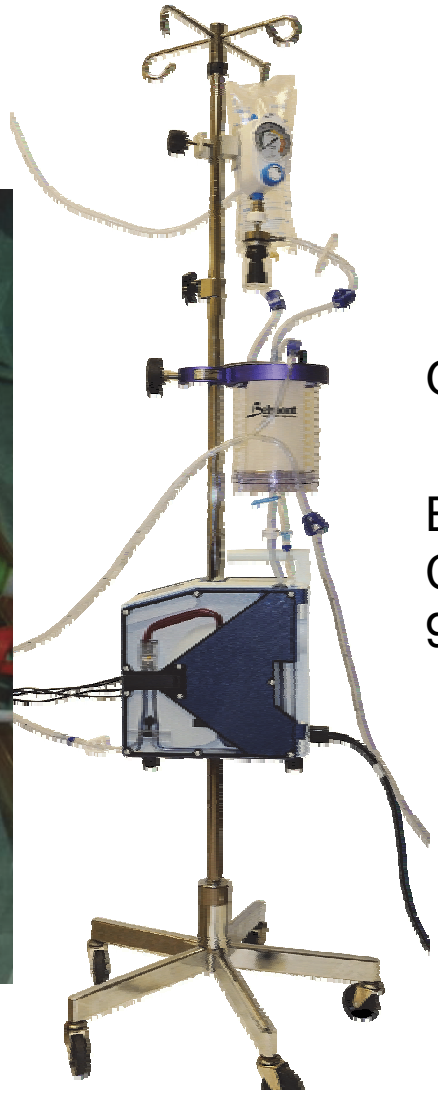
Starting HIPEC





Starting HIPEC





41 – 42°C

Gabe der CTX

Einwirken der CTX (30-90min)

Starting HIPEC

-> Talk to your oncologist!

Show him/her the data!

PC – Colorectal Cancer

Randomized Trial of Cytoreduction and Hyperthermic Intraperitoneal Chemotherapy Versus Systemic Chemotherapy and Palliative Surgery in Patients With Peritoneal Carcinomatosis of Colorectal Cancer

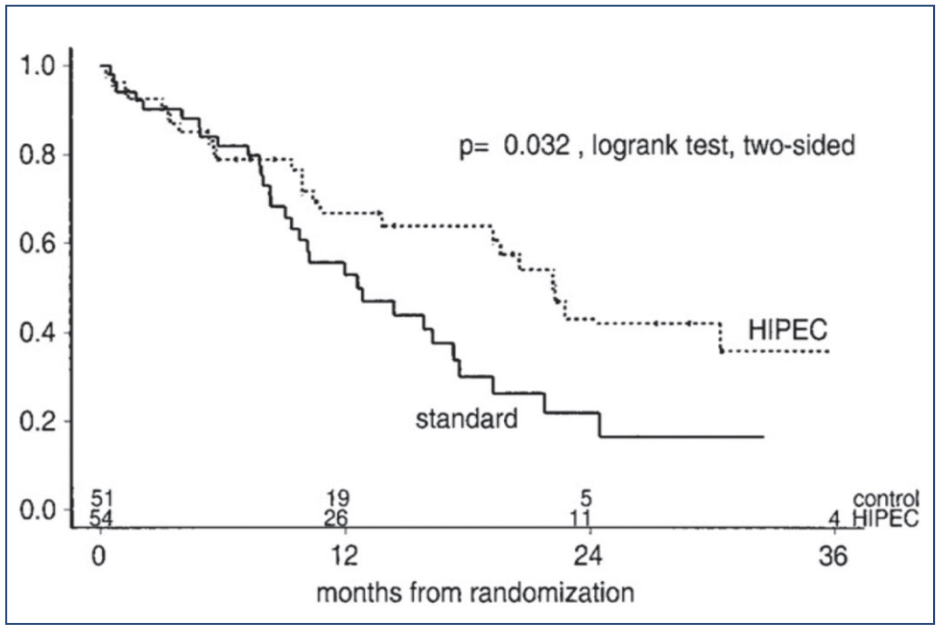
By Vic J. Verwaal, Serge van Ruth, Eelco de Bree, Gooike W. van Slooten, Harm van Tinteren, Henk Boot, and Frans A.N. Zoetmulder

105 Patients; Standard-Therapy (i.v. 5-FU / Leu) vs. Cytoreduktion + HIPEC
1998 - 2001

Verwaal et al. J Clin Oncol 2003; 21:3737-43

PC – Colorectal Cancer

RCT



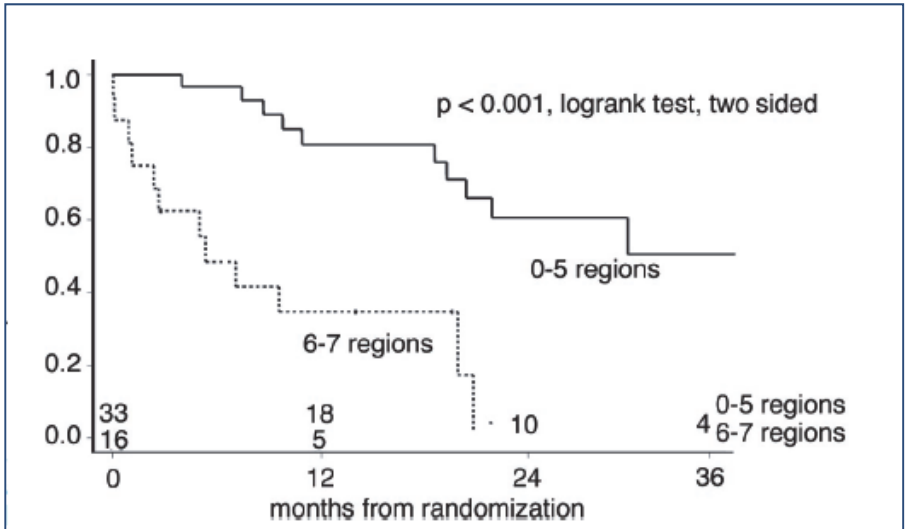


Fig 5. Kaplan-Meier survival curve of 49 patients with peritoneal carcinomatosis treated by cytoreduction followed by HIPEC, comparing the number of regions with residual tumor.

Verwaal et al. J Clin Oncol 2003; 21:3737-43

PC – Colorectal Cancer

VOLUME 27 · NUMBER 5 · FEBRUARY 10 2009

JOURNAL OF CLINICAL ONCOLOGY

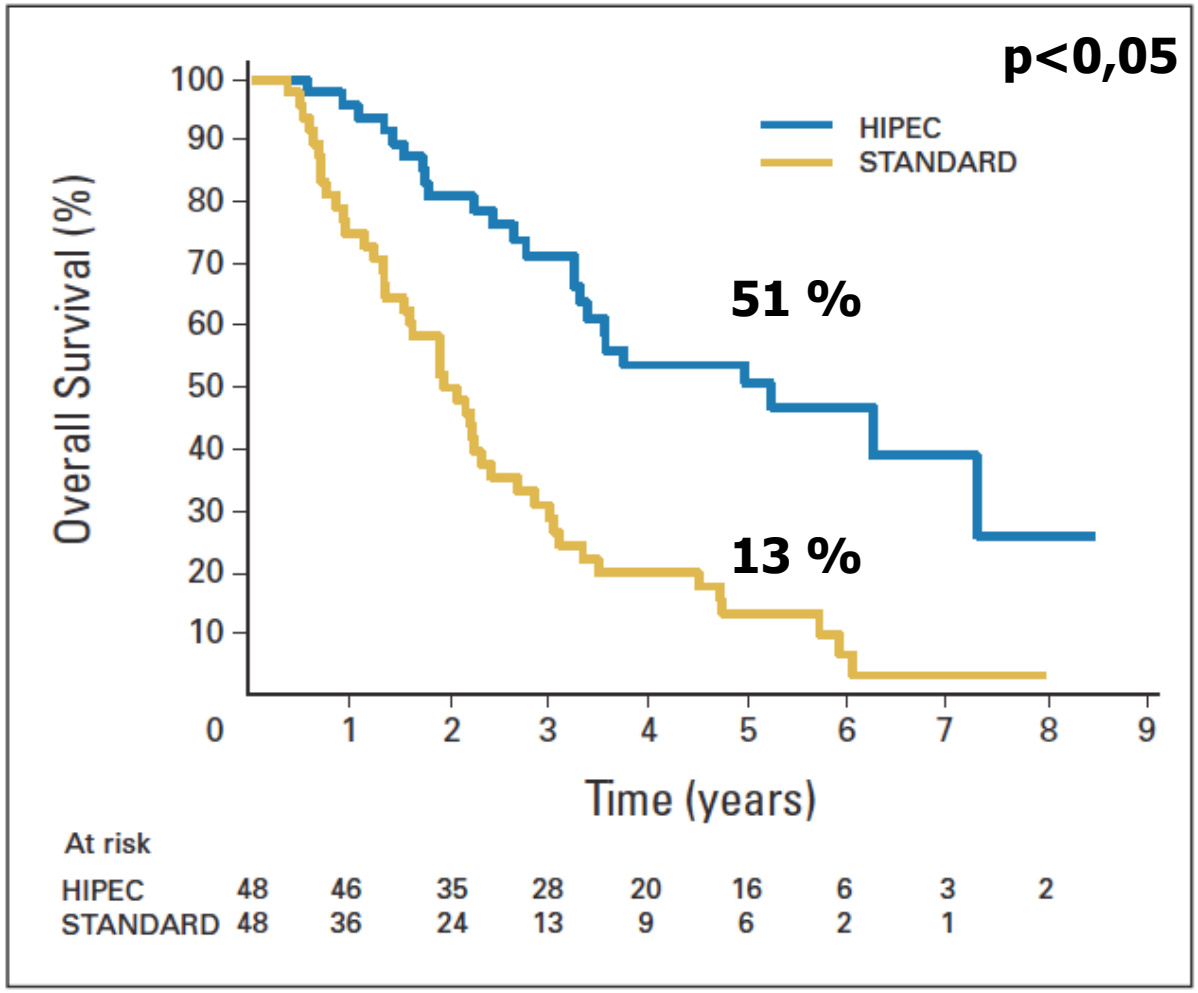
ORIGINAL REPORT

Complete Cytoreductive Surgery Plus Intraperitoneal Chemohyperthermia With Oxaliplatin for Peritoneal Carcinomatosis of Colorectal Origin

Dominique Elias, Jérémie H. Lefevre, Julie Chevalier, Antoine Brouquet, Frédéric Marchal, Jean-Marc Classe, Gwenaël Ferron, Jean-Marc Guilloit, Pierre Meeus, Diane Goéré, and Julia Bonastre

Elias et al. J Clin Oncol 2009; 27:681-685

PC – Colorectal Cancer



Elias et al. J Clin Oncol 2009; 27:681-685

PC – Colorectal Cancer

ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

EJSO 36 (2010) 599–603

EJSO
the Journal of Cancer Surgery

www.ejso.com

Review

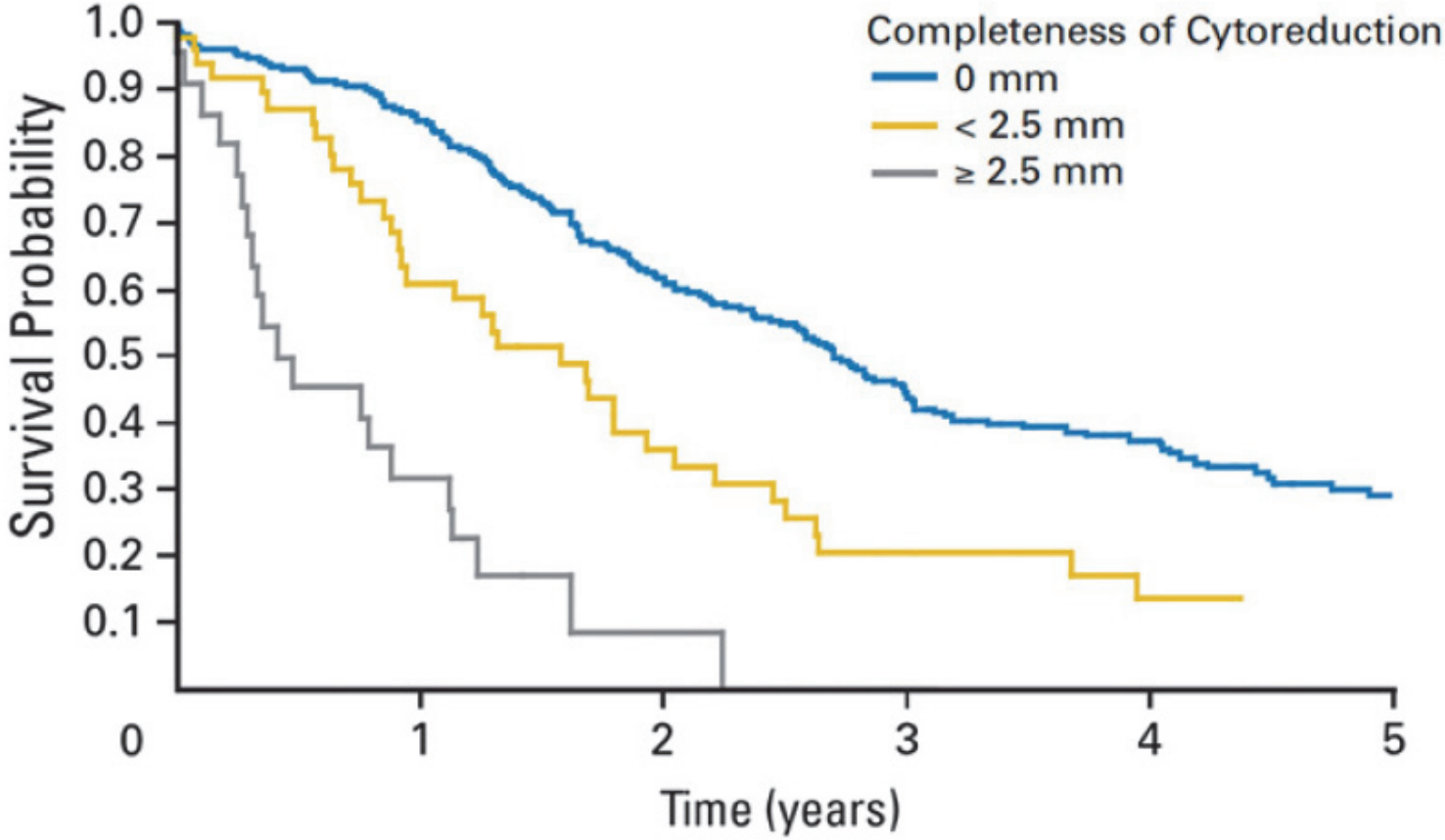
Curative treatment of colorectal peritoneal carcinomatosis: Current status and future trends

L. Maggiori, D. Elias*

Department of Surgical Oncology, Institut Gustave Roussy, 39 rue Camille Desmoulins, 94805 Villejuif Cedex, France

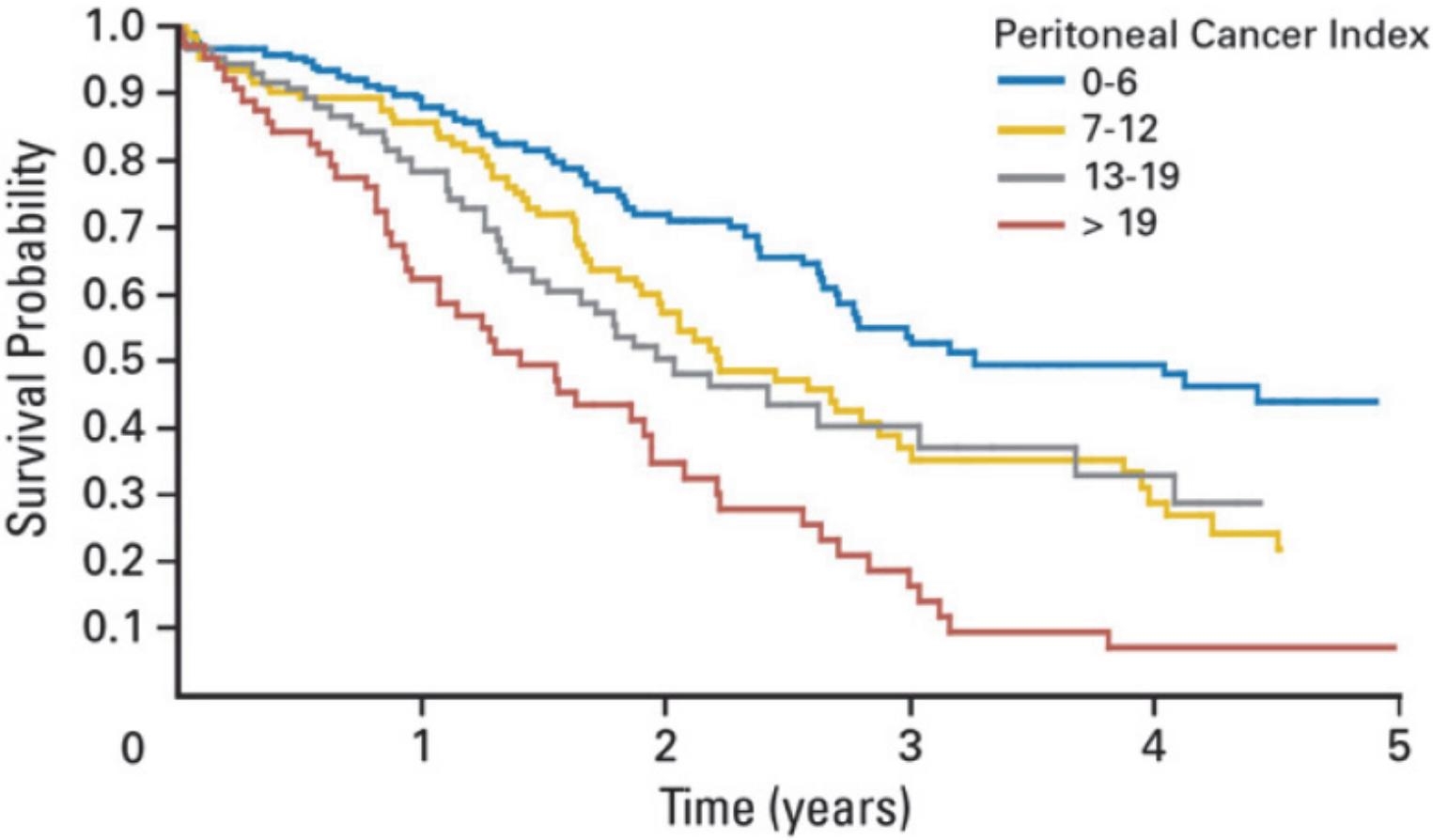
Maggiori et al. EJSO 2010; 36:599-603

PC – Colorectal Cancer



Maggiori et al. EJSO 2010; 36:599-603

PC – Colorectal Cancer



Maggiori et al. EJSO 2010; 36:599-603

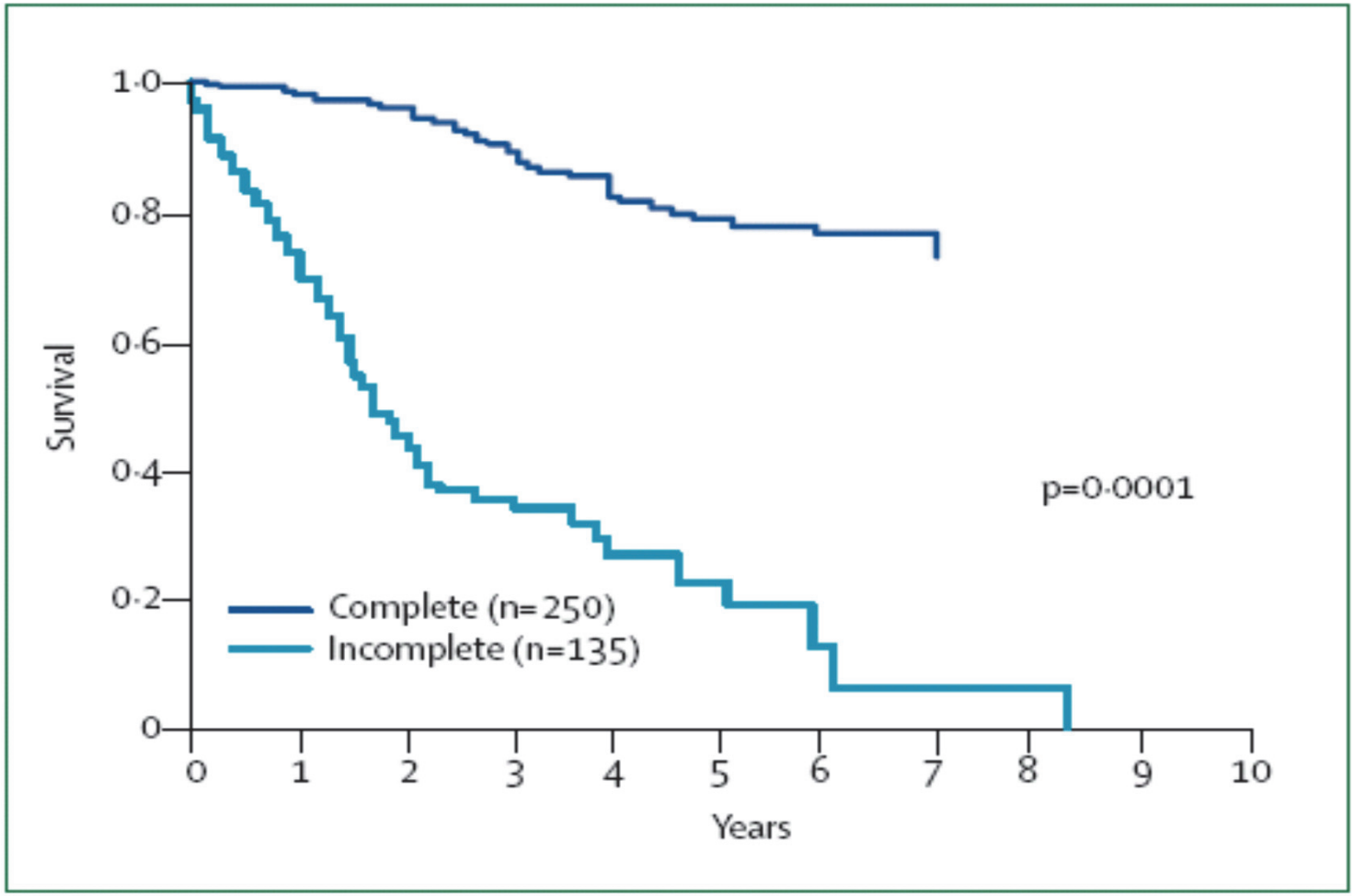
PC – Pseudomyxoma peritonei

Survival

Chief investigator	n	Median survival (months)	Survival rates (%)				
			1-year	2-year	3-year	5-year	10-year
Sugarbaker[30]	501	156	–	–	–	72	55
Zoetmulder[36]	103	NA	90	83	71	60	–
Loggie[40]	110	64	80	–	59	53	–
Piso[42]	28	51	–	–	–	–	–
Deraco[44]	33	NA	96	96	96	96	–
Glehen[46]	27	NA	100	88	78	52	–
McGregor[47]	11	NA	–	–	60	–	–
Morris[48]	50	NA	89	76	69	69	–

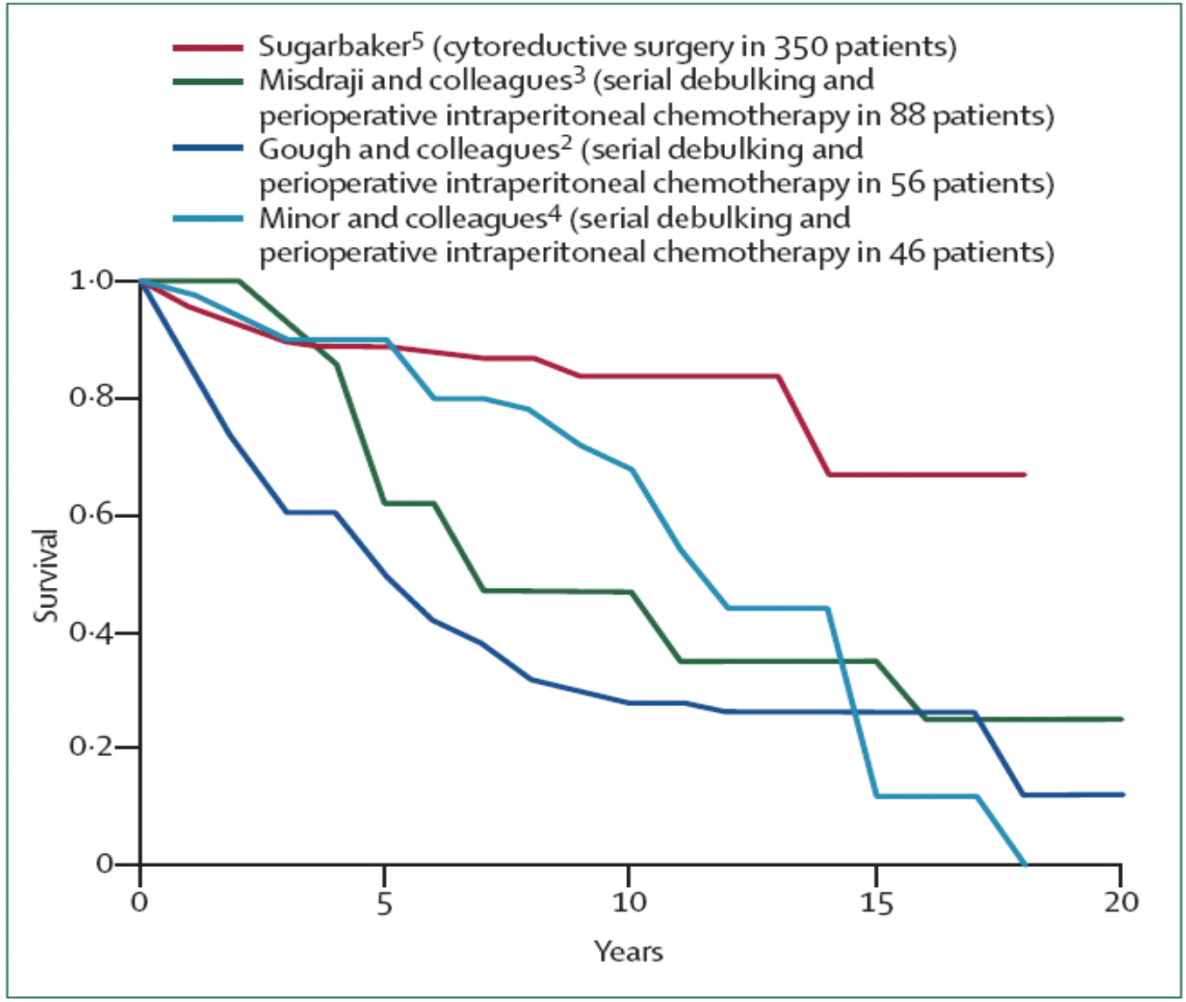
Yan et al. Ann Surg Oncol 2007;14:484-92

PC – Pseudomyxoma peritonei



Sugarbaker et al. Ann Surg Oncol 1999;6:727-31

PC – Pseudomyxoma peritonei



Sugarbaker P, Lancet Oncol 2006;7:69-76

PC – Gastric Cancer

REVIEW

Treatment of Gastric Cancer With Peritoneal Carcinomatosis by Cytoreductive Surgery and HIPEC: A Systematic Review of Survival, Mortality, and Morbidity

RICHDEEP S. GILL, MD,[1]* DAVID P. AL-ADRA, MD,[1] JEEVAN NAGENDRAN, MD,[1]
SANDY CAMPBELL, BA, MLS, AFALIA (CP),[2] XINZHE SHI, MPH,[3] ERIKA HAASE, MD MSc FRCSC,[1]
AND DANIEL SCHILLER, MD MSc FRCSC[1]

Gill et al. J Surg Oncol 2011;104:692-698

PC – Gastric Cancer

Refs.	Country	Study design	No. of patients	Age (years)	Gender (% male)	Dx	Length of follow-up (months)
Glehen et al. [19]	France	Retrospective case series multicenter	159	53.4[a]	52.2	GC + PC	20
Yang et al. [20]	China	Prospective case series	21	50	53.6	GC + PC	22
Shen et al. [21]	USA	Prospective case series	43	53[a]	N/A	GC + PC	55
Scaringi et al. [22]	France	Prospective controlled study	26	53.7[a]	73	GC + PC	N/A
Roviello et al. [23]	Italy	Prospective case series	12	55[a]	27.1	GC + PC	19
Farma et al. [24]	USA	Retrospective case series	9	48	33.3	GC + PC	74
Yonemura et al. [25]	Japan	Prospective case series	107	52[a]	45.8	GC + PC	46
Mussa et al. [26]	Italy	Prospective case series	7	52	N/A	GC + PC	N/A
Fujimura et al. [27]	Japan	Retrospective case series	15	49.7[a]	46.7	GC + PC	36
Beaujard et al. [28]	France	Prospective case series	42	51[a]	56.6	GC + PC	74
Total/*median*			441	48.5[a]			*46*

Gill et al. J Surg Oncol 2011;104:692-698

PC – Gastric Cancer

Refs.	Median survival (months)	Survival with CCR 0/1 (months)	1-Year survival (%)	2-Year survival (%)	5-Year survival (%)
Glehen et al. [19]	9.2	15	43		13
Yang et al. [20]		43.4	50	42.8	
Shen et al. [21]	6.1				
Scaringi et al. [22]	6.6	15			
Roviello et al. [23]					
Farma et al. [24]	8		22.2	11.1	
Yonemura et al. [25]	11.5	19.2	35.5	13.1	
Mussa et al. [26]			68	50	13
Fujimura et al. [27]			57	21	
Beaujard et al. [28]			48	33	
Range	6.1–9.2	9.5–43.4	22–68	11–50	
Median	7.9	15	43	18	13

Gill et al. J Surg Oncol 2011;104:692-698

PC – Ovarian Cancer

J Cancer Res Clin Oncol (2009) 135:1637–1645
DOI 10.1007/s00432-009-0667-4

REVIEW

Intraoperative hyperthermic intraperitoneal chemotherapy after cytoreductive surgery in ovarian cancer peritoneal carcinomatosis: systematic review of current results

Terence C. Chua · Greg Robertson · Winston Liauw · Rhonda Farrell · Tristan D. Yan · David L. Morris

Chua et al. J Cancer Res Clin Oncol 2009;135:1637-45

PC – Ovarian Cancer

First author	Year	Patients, *n*	Median follow-up (months)	Median overall survival (months)	Median overall survival for optimal cytoreduction (months)	Overall 5-year survival (%)
Bereder et al. (2009)	2009	246	NR	49	56	35
Pavlov et al. (2009)	2009	56	60	38	NR	NR
Fagotti et al. (2009)	2009	25	18	NR	NR	NR
Guardiola et al. (2009)	2009	47	23	NR	NR	NR
Di Giorgio et al. (2008)	2008	47	NR	24	26	17
Bae et al. (2007)	2007	67	NR	NR	NR	66
Cotte et al. (2007)	2007	81	47	28	55	NR
Helm et al. (2007)	2007	18	16[b]	31	31	NR
Rufian et al. (2006)	2006	33	NR	48	66	37
Raspagliesi et al. (2006)	2006	40	26	32	NR	15
Reichman et al. (2005)	2005	13	14	NR	NR	NR
Gori et al. (2005)	2005	29	64[b]	64	NR	NR
Look et al. (2004)	2004	28	27	46	56	NR
Ryu et al. (2004)	2004	57	47	NR	41	54
Piso et al. (2004)	2004	19	24	33[b]	44[b]	15
Zanon et al. (2004)	2004	30	19[b]	28	38	12
Chatzigeorgiou et al. (2003)	2003	20	NR	NR	29	NR
de Bree et al. (2003)	2003	19	30[b]	54	NR	42
Cavaliere et al. (2000)	2000	20	20	25	NR	NR

NR not reported

[a] 2-year survival result

[b] Refers to results expressed as mean

Chua et al. J Cancer Res Clin Oncol 2009;135:1637-45

Starting HIPEC

Starting HIPEC

-> Talk to your pharmacologist!

Starting HIPEC

Starting HIPEC

Safety criterias !

Potential toxic products

Talk to your occupational physician

Starting HIPEC

Information

<u>In-house training:</u>

Including Surgeons, Anesthesiologists, scrub nurses, cleaning staff

Starting HIPEC

Starting HIPEC

Getting it started:

Dresden HIPEC experience:

Started 5/2013

Starting HIPEC

35 x cytoreductive surgery + HIPEC
(+ 14 x exploration only)

13	CRC
10	Gastric cancer
9	Pseudomyxoma peritonei
3	Ovarian Cancer

Morbidity 42 % (15/35)
Mortality 2.8 % (1/35)

Starting HIPEC

Summary:

1. Get the right hardware
2. Start with the „easy“ cases
3. Talk to your oncologist
4. Talk to your pharmacologist
5. Security advises /Safety criterias
6. In-house training
7. Inform surrounding hospitals/oncologists

Quality of life